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MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number ~~10/664,421~~ 10/789,818 NASH
Filing Date 09/16/2003
First Named Inventor Ryan Bremer
Group Art Unit 1656
Examiner Name Nashed
Attorney Docket Number 039363-0703

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
NN	A1	20010008765		Shinoki et al.	07/19/2001	
	A2	20010012537		Anderson et al.	08/09/2001	
	A3	20010014448		Chappa et al.	08/16/2001	
	A4	20010014449		Nerenberg et al.	08/16/2001	
	A5	20010016322		Caren et al.	08/23/2001	
	A6	20010018642		Balaban et al.	08/30/2001	
	A7	20010019827		Dawson et al.	09/06/2001	
	A8	6100254		Budde et al.	08/08/2000	
NN	A9	6197495		Qui et al.	03/06/2001	

UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
NN	A10	WO	99/26966		The Regents of the University of California	06-03-1999		
NN	A11	WO	01/58951		Stichting Voor de Technische Wetenschappen	08-16-2001		
NN	A12	WO	02/24722		Prochon Biotech Ltd.	03-28-2002		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶

Examiner Signature

/Nashaat Nashed/ (01/30/2007)

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NN	A13	BOEHM, <i>et al.</i> , "Novel Inhibitors of DNA Gyrase: 3D Structure Based Biased Needle Screening, Hit Validation by Biophysical Methods, and 3D Guided Optimization. A Promising Alternative to Random Screening," <i>J. Med. Chem.</i> 43:2664-2674 (2000)	
	A14	BOHACEK, <i>et al.</i> , "Multiple Highly Diverse Structures Complementary to Enzyme Binding Sites: Results of Extensive Application of a <i>de Novo</i> Design Method Incorporating Combinatorial Growth," <i>J. Am. Chem. Soc.</i> 116:5560-5571 (1994)	
	A15	CHONG, <i>et al.</i> , "Molecular dynamics and free-energy calculations applied to affinity maturation in antibody 48G7," <i>PNAS</i> 96:14330-14335 (1999)	
	A16	CORNELL, <i>et al.</i> , "A Second Generation Force Field for the Simulation of Proteins, Nucleic Acids, and Organic Molecules," <i>J. Am. Chem. Soc.</i> 117:5179-5197 (1995)	
	A17	DONINI and KOLLMAN, "Calculation and Prediction of Binding Free Energies for the Matrix Metalloproteinases," <i>J. Med. Chem.</i> 43:4180-4188 (2000)	
	A18	DOWNS and WILLETT, "Similarity Searching and Clustering of Chemical-Structure Databases Using Molecular Property Data," <i>J. Chem. Inf. Comput. Sci.</i> 34:1094-1102 (1994)	
	A19	ELCOCK, Realistic modeling of the denatured states of proteins allows accurate calculations of the pH dependence of protein stability. <i>J. Mol. Biol.</i> , 294:1051-1062, (1999).	
	A20	FELDER, "The Challenge of Preparing and Testing Combinatorial Compound Libraries in the Fast Lane, at the Front End of Drug Development," <i>Chimia</i> 48:531-541 (1994)	
	A21	GILLILAND and LADNER, Crystallization of biological macromolecules for X-ray diffraction studies. <i>Current Opinion in Structural Biology</i> , 6:595-603, 1996.	
	A22	JARVIS and PATRICK, "Clustering Using a Similarity Measure Based on Shared Near Neighbors," <i>IEEE Transactions on Computers</i> 11:1025-1034 (1973)	
	A23	KE and DOUDNA, Crystallization of RNA and RNA-protein complexes. <i>Methods</i> , 34:408-414, (2004).	
NN	A24	MASSOVA and KOLLMAN, "Computational Alanine Scanning to Probe Protein - Protein Interactions: A Novel Approach to Evaluate Binding Free Energies," <i>Journ. of Amer. Chem. Soc.</i> 121(36):8133-8143 (1999)	

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DLMR_286455.1

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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	40/664,424 10/789,818 A/E
		Filing Date	09/16/2003
		First Named Inventor	Ryan Bremer
		Group Art Unit	1656
		Examiner Name	Nashed
Sheet	3	of	4
		Attorney Docket Number	039363-0703

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
NN	A25	MCGOVERN, <i>et al.</i> , "A Common Mechanism Underlying Promiscuous Inhibitors from Virtual and High-Throughput Screening," <i>J. Med. Chem.</i> 45:1712-1722 (2002)	
	A26	OBRECHT, <i>et al.</i>, "Solid-Supported Combinatorial and Parallel Synthesis of Small Molecular Weight Compound Libraries," <i>Linker Mol. & Cleav. Strat.</i> P. 85. Incomplete citation.	
NN	A27	OWEN, <i>et al.</i> , "Two Structures of the catalytic domain of phosphorylase kinase: an active protein kinase complexed with substrate analogue and product," <i>Curr. Biol. Ltd.</i> 3:467-482 (1995)	
NN	A28	PEARLMAN and CHARIFSON, "Are Free Energy Calculations Useful in Practice? A Comparison with Rapid Scoring Functions for the p38 MAP Kinase Protein System," <i>J. Med. Chem.</i> 44:3417-3423 (2001)	
NN	A29	RIPKA, <i>et al.</i> , "Aspartic Protease Inhibitors Designed from Computer-Generated Templates Bind as Predicted," <i>Org. Lett.</i> 15:2309-2312 (2001)	
NN	A30	WIENCEK, New strategies for protein crystallization growth. <i>Ann.Rev.Biomed.Eng.</i> , 1:505-534, (1999).	
NN	A31	WILLETT, "Chemical Similarity Searching," <i>J. Chem. Inf. Comput. Sci.</i> 38:983-996 (1998)	

Examiner Signature	/Nashaat Nashed/ (01/30/2007)	Date Considered	
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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete If Known	
				Application Number	10/684,421 10/789,818
				Filing Date	09/16/2003
				First Named Inventor	Ryan Bremer
				Group Art Unit	1656
				Examiner Name	Nashed
Sheet	4	of	4	Attorney Docket Number	039363-0703

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
NN	A32	YANG et al., Peptide analogs from E-cadherin with different calcium-binding affinities. J. Peptide Research, 55:203-215, 2000.	

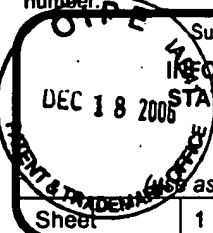
Examiner Signature	/Nashaat Nashed/ (01/30/2007)	Date Considered	
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 Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
		Application Number	10/789,818
Filing Date		02/27/2004	
First Named Inventor		Prabha Ibrahim	
Art Unit		1656	
Examiner Name		Nashed, Nashaat T.	
Attorney Docket Number		039363-1202	
Sheet	1	of	2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
NN	A1	US-5837524	11.17.1998	Schlessinger et al.	
	A2	US-5942428	08.24.1999	Mohammadi et al.	
	A3	US-6188254	09.09.2000	Budde et al.	
	A4	US-6197495	05.06.2001	Chu et al.	

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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code* Number* Kind Code ⁵ (if known)				

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NN	A5	Cohen et al., Molecular modeling software and methods for medicinal chemistry. Journal of Medicinal Chemistry, 33(3): 883-894, 1990.				
	A6	Gilliland and Ladner, Crystallization of biological macromolecules for X-ray diffraction studies. Current Opinion in Structural Biology, 6:595-603, 1996.				
	A7	Ke and Doudna, Crystallization of RNA and RNA-protein complexes. Methods, 34:408-414, 2004.				
	A8	Wiencek et al, New strategies for protein crystal growth. Annual Review of Biomedical Engineering, 01:505-534, 1999.				

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				Filing Date	02/27/2004
				First Named Inventor	Prabha Ibrahim
				Art Unit	1656
				Examiner Name	Nashed, Nashaat T.
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NN	A9	International Search Report for PCT Application PCT/US2004/005904	

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First Named Inventor	Prabha Ibrahim
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Attorney Docket Number	039363-1202

Sheet

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of

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NN	A1	5698401		Fesik et al.	12-16-1997	
NN	A2	5804390		Fesik et al.	09-08-1998	
	A3	6197435		Gai et al.	03-06-2001	
	A4	6297021		Nienaber et al.	10-02-2001	
NN	A5	6465484		Bilodeau et al.	10-15-2002	
	A6	20020048782		Lev et al.	04-25-2002	
	A7	20010008765		Shinoki, Hiroshi et al.	07/19/2001	
	A8	20010012597		Anderson, Norman G. et al.	08/09/2001	
	A9	20010014448		Chappa, Ralph A. et al.	08/16/2001	
	A10	20010014449		Nerenberg, Michael et al.	08/16/2001	
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NN	A14	EP	0,154,734		Immunex Corporation	08-29-1990		
NN	A15	WO	96/18738		Sugen, Inc.	06-20-1996		
NN	A16	WO	97/46313		Array Technologies	12-11-1997		
NN	A17	WO	98/35056		Merck & Co., Inc.	08-13-1998		
NN	A18	WO	99/63931		The Salk Institute for Biological Studies	12-16-1999		
NN	A19	WO	99/09217		Hyseq, Inc.	02-25-1999		

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	A20	WO	99/20960		The Regents of the University of California	06-09-1999		
NN	A21	WO	99/51773		Phylos, Inc.	10-14-1999		
NN	A22	WO	01/58951		Stichting Voor de Technische Wetenschappen	08-16-2001		
	A23	WO	02/24722		Prochen Biotech Ltd.	03-28-2002		

NON PATENT LITERATURE DOCUMENTS

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NN	A24	Ashani and Wilson, A covalent affinity column for the purification of acetylcholinesterase. Biochem. Biophys. Acta, 276:317-322, 1972.	
	A25	BOEHM, et al., "Novel Inhibitors of DNA Gyrase: 3D Structure Based Biased Needle Screening, Hit Validation by Biophysical Methods, and 3D Guided Optimization. A Promising Alternative to Random Screening," J. Med. Chem. 43:2664-2674 (2000)	
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	A27	CHONG, et al., "Molecular dynamics and free-energy calculations applied to affinity maturation in antibody 48G7," PNAS 96:14330-14335 (1999)	
NN	A28	COE and STORER, "Solution-phase combinatorial chemistry." Molecular Diversity, 4:1-38, 1999.	
	A29	BORNEILL, et al., "A Second Generation Force Field for the Simulation of Proteins, Nucleic Acids, and Organic Molecules," J. Am. Chem. Soc. 117:5179-5197 (1995)	
	A30	DONINI and KOLLMAN, "Calculation and Prediction of Binding Free Energies for the Matrix Metalloproteinases," J. Med. Chem. 43:4180-4188 (2000)	

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				Application Number	10/789,818
				Filing Date	02/27/2004
				First Named Inventor	Prabha Ibrahim
				Group Art Unit	1646
				Examiner Name	
Sheet	3	of	6	Attorney Docket Number	039363-1202

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	A31	DOWNES and WILLETT, "Similarity Searching and Clustering of Chemical-Structure Databases Using Molecular Property Data," J. Chem. Inf. Comput. Sci. 34:1094-1102 (1994)		
	A32	ELCOCK, Realistic modeling of the denatured states of proteins allows accurate calculations of the pH dependence of protein stability. Journal of Molecular Biology, 284:1051-1062, 1999.		
	A33	FEINBERG et al., Zinc-directed inhibitors for zinc proteinases. Acta Cryst., D51: 428-449, 1995.		
	A34	FELDER, E.R., "The Challenge of Preparing and Testing Combinatorial Compound Libraries in the Fast Lane, at the Front End of Drug Development," Chimia 48:531-541 (1994)		
NN	A35	FITZGERALD et al., Crystallographic analysis of a complex between human immunodeficiency virus type 1 protease and acetyl-pepstatin at 2.0-A resolution. The Journal of Biological Chemistry, 265 (24): 14209-14219, 1990.		
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NN	A37	HENDRICKSON and OGATA, "Phase Determination from Multiwavelength Anomalous Diffraction Measurements," Methods of Enzymology 276:494-523 (1997)		
NN	A38	HENDRICKSON et al., "Selenomethionyl Proteins Produced for Analysis by Multiwavelength Anomalous Diffraction (MAD): a Vehicle for Direct Determination of Three-Dimensional Structure," The EMBO Journal 9(5):1665-1672 (1990)		
	A39	JARVIS and PATRICK, "Clustering Using a Similarity Measure Based on Shared Near Neighbors," IEEE Transactions on Computers 41:1025-1034 (1992)		
NN	A40	KLEINBERG and WANKE, New approaches and technologies in drug design and discovery. Am. J. Health-Syst Pharm., 52: 1323-1336, 1995.		
NN	A41	LEBL et al., "One-Bead-One-Structure," Biopolymers (Peptide Science) 37:177-198 (1995)		
	A42	MASSOVA and KOLLMAN, "Computational Alanine Scanning to Probe Protein-Protein Interactions: A Novel Approach to Evaluate Binding Free Energies," Journ. of Amer. Chem. Soc. 121(36):8133-8143 (1999)		

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	A43	MCGOVERN, et al., "A Common Mechanism Underlying Promiscuous Inhibitors from Virtual and High Throughput Screening," <i>J. Med. Chem.</i> 45:1742-1722 (2002)	
NN	A44	MCPHERSON et al., The Role of X-ray crystallography in structure-based rational drug designs. Chapter 6 in Chemical Structures Approaches Ration. Drug Design. Edited by D.V. Weiner et al. Boca Raton: CRC Press, 1995, p. 161-179.	
NN	A45	NAGAR et al., "Crystal Structures of the Kinase Domain of c-Abl in Complex with the Small Molecular Inhibitors PD173956 and Imatinib (STI-571)," <i>Cancer Research</i> 62:4236-4243 (2002)	
	A46	OBRECHT, et al., "Solid-Supported Combinatorial and Parallel Synthesis of Small-Molecular-Weight Compound Libraries," <i>Linker Mol. & Cleav. Strat.</i> P. 85.	
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	A48	PEARLMAN and CHARIFSON, "Are Free Energy Calculations Useful in Practice? A Comparison with Rapid Scoring Functions for the p38 MAP Kinase Protein System," <i>J. Med. Chem.</i> 44:3417-3423 (2001)	
	A49	RIPKA, et al., "Aspartic Protease Inhibitors Designed from Computer-Generated Templates Bind as Predicted," <i>Org. Lett.</i> 15:2309-2312 (2001)	

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				Group Art Unit	1646
				Examiner Name	
Sheet	5	of	6	Attorney Docket Number	039363-1202

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NN	A50	ROSENBERRY et al., Purification of acetylcholinesterase by affinity chromatography and determination of active site stoichiometry. The Journal of Biological Chemistry, 247 (5): 1555-15565, 1972.		
NN	A51	SICA et al., Affinity chromatography and the purification of estrogen receptors. The Journal of Biological Chemistry, 248 (18): 6543-6558, 1973.		
	A52	WILLETT, P., "Chemical Similarity Searching," J. Chem. Inf. Comput. Sci. 38:082-096 (1998)		
NN	A53	WUTHRICH, NMR-This other method for protein and nucleic acid structure determination. Acta Cryst., D51: 249-270, 1995.		
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NN	A55	KEISS et al., Beta-Galactosidase decreases the binding affinity of the insulin-like-growth-factor-ii/mannose-6-phosphate receptor for the insulin-like-growth-factor II. European Journal of Biochemistry, 190:71-77, 1990		
NN	A56	BOS et al., The 500 Dalton rule for the skin penetration of chemical compounds and drugs. Experimental Dermatology, 9:165-169, 2000.		

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NN	A57	BOGER et al., Synthesis of a functionalized rigid bicycle[2,2,1]heptane: a useful hapten for eliciting catalytic antibodies. Journal of Organic Chemistry, 59:5078-5079, 1994.		
NN	A58	PHAN et al., Extensively methylated myosin subfragment-1; Examination of local structure, interactions with nucleotides and actin, and ligand-induced conformational changes. Biochemistry, 33:11286-11295, 1994.		
NN	A59	MARYANOFF et al., Structure activity studies on anticonvulsant sugar sulfamates related to topiramate. Enhanced potency with cyclic sulfate derivatives. Journal of Medicinal Chemistry, 41:1315-1343, 1998.		
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